

Effective field theory analysis of the tau to pi pi nu_tau decays

Abstract

We perform an effective field theory analysis of the tau to pi pi nu_tau decays, that includes the most general interactions between SM fields up to dimension six, assuming massless neutrinos. As a result, we set precise bounds on non-standard scalar and tensor interactions and show how Dalitz plots in Mandelstam variables and the tau-pi^0 angle, together with the measurement of the forward-backward asymmetry, can be very useful in pinning down new physics with Belle-II near future measurements.

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